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CURRENT SERIAL RECORDS



FOREST PRODUCTS LABORATORY
LIST OF PUBLICATIONS
ON
BOX AND CRATE CONSTRUCTION
AND PACKAGING DATA

JANUARY 1966

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Madison, Wisconsin 53705

In cooperation with the University of Wisconsin

LIST OF PUBLICATIONS ON BOX AND
CRATE CONSTRUCTION AND PACKAGING DATA¹

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¹This list was previously issued as Forest Products Laboratory Report
No. 791 under the same title.

INSTRUCTIONS FOR OBTAINING PUBLICATIONS

Publications not available for distribution at this Laboratory are marked with an asterisk (*).

Single copies of reprints and processed reports may be obtained free upon request from the Director, Forest Products Laboratory, Madison, Wis., 53705.

Federal Government publications, if not available for free distribution at this Laboratory, may be purchased at the price indicated from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

Requests for copies of these publications should stipulate both the title and identifying number. Send money order, draft, or cash; stamps or personal checks are not accepted.

Copies of military specifications required by the activities of the Departments of the Army, the Navy, and the Air Force may be requested by government personnel through established departmental channels. Requests for specifications from other nonmilitary sources should be directed to one of the following custodians:

GL Commanding General
U. S. Army Natick Laboratories
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Natick, Mass. 07162

MC Commandant of the Marine Corps
Attn: Code CSL
Headquarters, USMC
Washington, D.C. 20380

MO Commanding General
U. S. Army Mobility Command
Attn: AMSMO-RDS
Warren, Mich. 48089

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Engineering Division
Attn: Code RREN-5
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Washington, D.C. 20360

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Department of the Navy
Washington, D.C. 20360

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INSTRUCTIONS FOR OBTAINING PUBLICATIONS (Continued)

<u>MR</u> Commanding Officer	<u>EL</u> Commanding General
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Trade journals containing articles herein listed may often be purchased from the publishers or may be consulted in various libraries.

ASTM standards may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa., 19103.

TAPPI standards may be obtained from the Technical Association of the Pulp and Paper Industry, 155 East 44th Street, New York, N. Y., 10017.

The Forest Products Laboratory reserves the right to furnish only those publications which in its judgment will give the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled except in unusual cases.

Title	Author	Publication and date
<u>NAILED-WOOD BOXES</u>		
Preservative moisture-repellent treatments for wooden packing boxes.	Verrall, A. F.	: Forest Prod. Jour. : 9(1): Jan. 1959.
*Nailing better wood boxes and crates.	: Anderson, L. O.	: USDA Handb. No. 160. : 40 pp., 1959. Available : from GPO, Washington, D. C. : 20402. 20¢.
Outdoor exposure of container-grade paper-overlaid veneers.	: Mohaupt, A. A.	: FPL Rpt. 2151. 1959.
Nailed and lock-corner wood boxes.	: Forest Products Laboratory	: FPL Rpt. 2129. 1958.
Technique of nailing a wood box.	: Anderson, L. O.	: Package Eng. June 1957.
Quality and performance of sliced shook from small ponderosa pine logs.	: Immelman, W. F. E.	: FPL Rpt. 2076. 1957. : +1963.
Common styles of nailed-wood boxes.	: Forest Products Laboratory	: FPL Tech. Note 164. : Rev. 1953.
Details of nailing for common styles of nailed wood boxes.	: Forest Products Laboratory	: FPL Tech. Note 182. : Reissued 1953.
Moisture content and storage affect strength of nailed wood boxes.	: Forest Products Laboratory	: FPL Tech. Note 128. : Rev. 1953.
The nailing of wood boxes.	: Forest Products Laboratory	: FPL Tech. Note B-10. : Rev. 1953.
Diversification in the purchasing of container lumber.	: Champion, F. J.	: The Chicago Purchaser : Mar. 1948.

+Information reviewed and reaffirmed.

Title	Author	Publication and date
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NAILED-WOOD BOXES (continued)

*Knotty lumber for boxes.	: Heck, G.E., and : Lanphire, I.B.	: USDA Cir. 105. 20 pp., : Available from GPO, : Washington, D.C. 20402. : 1930. 10¢.
Suitability of little-used species for containers.	: Carlson, T.A.	: Amer. Lbrmn. : Mar. 23, 1929. FPL : Rpt. 1402. 1929. Same; : Barrel & Box Mar. 1929; : Miss. Valley Lbrmn. : Mar. 15, 1929; Packages : Mar. 1929; Packing & : Shipping Mar. 1929; : Timberman Mar. 1929; : "Results of study of : little-used species of : wood for containers," : Distribution Economy : Mar. 1929.
<u>Federal Specifications</u>		
*Boxes; wood, nailed, and lock- corner.		: PPP-B-621. 20¢.

NAILED-WOOD CRATES

*Wood crate design manual.	: Anderson, L.O., : and Heebink, T.B.	: USDA Handb. No. 252. : 131 pp., 1964. Available : from GPO, Washington, D.C. : 20402. 70¢.
*Nailing better wood boxes and crates.	: Anderson, L.O.	: USDA Handb. No. 160. : 40 pp., 1959. Available : from GPO, Washington, D.C. : 20402. 20¢.
Use of short boards in sheathing crates.	: Forest Products : Laboratory	: FPL Rpt. No. 1666-17. : 1947.+1958.

+Information reviewed and reaffirmed.

Title

Author

Publication and date

NAILED-WOOD CRATES (continued)

Technique of nailing a wood crate. : Anderson, L. O. : Package Eng. Nov. 1957.

The crate corner. : Forest Products : FPL Tech. Note 134.
: Laboratory : Reissued 1953.

How to obtain rigidity in crate construction. : Forest Products : FPL Tech. Note 172.
: Laboratory : Reissued 1953.

Federal Specifications

*Crates, wood, for household goods. : : PPP-C-580. 20¢.

*Crate, wood, open, maximum capacity 2,500 lb. : : PPP-C-650.

Military Specifications

*Crates, wood; lumber and ply-wood sheathed, nailed and bolted. : : MIL-C-104A (MO or
: SA)

*Crates; open, wood (2,500 to 10,000 pounds). (Overseas,) : : MIL-C-3774 (MO or
: SA)

*Crates; wood, open, demountable: 10,000 pound maximum load. : : MIL-C-5406 (Brookley
: AFB)
(Domestic or overseas.) : :

*Crate, wood, open, fuel tank, external assembled. (Domestic or overseas.) : : MIL-C-9437C (Brookley
: AFB)

*Containers: Air and surface shipment of aircraft components : : MIL-C-25010 (Brookley
(2,000-pound maximum load). : : AFB)

Title

Author

Publication and date

NAILED-WOOD CRATES (continued)

*Crates, wood, open, domestic (for lightweight bulky airframe items).	:	:	MIL-C-25139 (Brookley AFB)
	:	:	
*Crates, wood, for lightweight bulky aircraft items.	:	:	MIL-C-25731 (Brookley AFB)

WIREBOUND CONTAINERS

Federal Specifications

*Boxes; wood, wirebound (Domestic or overseas.)	:	:	PPP-B-585A. 35¢.
	:	:	

Military Specifications

*Crates; wood, slatted style, wirebound, domestic.	:	:	MIL-C-11133B (GL or SA)
	:	:	
*Boxes, consolidation.	:	:	MIL-B-21827A (GL or SA)
	:	:	
*Crates, sheathed, wood, wire- bound.	:	:	MIL-C-22806A (GL or WP)
	:	:	
*Boxes, pallet type, material handling, wood, wirebound.	:	:	MIL-B-43096 (EL)
	:	:	
*Boxes, ammunition packing, wood, wirebound.	:	:	MIL-B-46506A (MU)

WOOD-CLEATED BOXES

Properties of ordinary wood compared with plywood.	:	Forest Products Laboratory	:	FPL Tech. Note 131. Rev. 1962.
	:		:	

Federal Specifications

*Boxes; fiberboard, wood- cleated. (Domestic or over- seas.)	:	:	PPP-B-591. 15¢.
	:	:	

Title

Author

Publication and date

WOOD-CLEATED BOXES (continued)

*Boxes; wood-cleated-plywood. : : PPP-B-601a. 10¢.
(Domestic or overseas.) : :

CORRUGATED AND SOLID FIBERBOARD BOXES

Edgewise compressive strength of:	Moody, R. C.	: U. S. Forest Serv. Res.
corrugated fiberboard as deter-	:	: Paper FPL 46. Dec.
mined by local instability.	:	: 1965.
	:	:
Comparison of two specimen	: Koning, J. W., Jr.	: U. S. Forest Serv. Res.
shapes for short column test of	:	: Note FPL-0109. 1965.
corrugated fiberboard.	:	:
	:	:
Dynamic tension testing equip-	: Godshall, W. D.	: U. S. Forest Serv. Res.
ment for paperboard and	:	: Note FPL-081. 1965.
corrugated fiberboard.	:	:
	:	:
Phenolic resin treatment	: Koning, J. W., Jr.,	: Package Eng. 10(10):
improves fiberboard compressive	: and Fahey, D. J.	: 130-139, Oct. 1965.
strength.	:	:
	:	:
A short column crush test of	: Koning, J. W., Jr.	: Tappi 47(3):134-137,
corrugated fiberboard.	:	: Mar. 1964.
	:	:
Effect of contents and load-	: Kellicutt, K. Q.	: Tappi 46(1):151A-154A,
bearing surface on compressive	:	: Jan. 1963.
strength and stacking life of	:	:
corrugated containers.	:	:
	:	:
Establishing new performance	: Kellicutt, K. Q.	: Tech. Pub. No. 21-62-05.
standards for corrugated fiber-	:	: Soc. of Packaging &
board.	:	: Handling Eng. Chicago,
	:	: Ill. Nov. 1962.
	:	:
Effect of age on paperboard and	: Skidmore, K. E.	: Paperboard Packaging
corrugated.	:	: 47(9):60-62, Sept. 1962.

Title	Author	Publication and date
<u>CORRUGATED AND SOLID FIBERBOARD BOXES (continued)</u>		
How paperboard properties affect corrugated container performance:	Kellicutt, K. Q.	Tappi 44(3):201A-204A. Mar. 1961.
Pulps and corrugating paperboards from farm-woodland chestnut oak.	McGovern, J. N., Heinig, M., Keller, E. L., and Martin, J. S.	FPL Rpt. 1738. Rev. 1960.
Effect of ventilating and hand-holes on compressive strength of fiberboard boxes.	Peters, C. C., and Kellicutt, K. Q.	FPL Rpt. 2152. 1959.
Structural design notes for corrugated containers.	Kellicutt, K. Q.	Package Eng. 4(2):60-63, 76-77, Feb. 1959; Fibre Containers
Note No. 1, Tensile strength of paperboard.		44(2):66-69, Feb. 1959.
Note No. 2, Compressive strength of paperboard-- Part I.		Package Eng. 4(3):76-77, Mar. 1959; Fibre Containers 44(5):65, 138, Mar. 1959.
Note No. 3, Compressive strength of paperboard-- Part II.		Package Eng. 4(4):108, Apr. 1959; Fibre Containers 44(5):65, 138, May 1959.
Note No. 4, Compressive strength of paperboard-- Part III.		Package Eng. 4(5):78 79, May 1959; Fibre Containers 44(6):82-83, June 1959
Note No. 5, Relationship of fiber orientation and basis weight to strength of paperboard.		Package Eng. 4(6):84-85, June 1959; Fibre Containers 44(7):78-82, July 1959.

Title

Author

Publication and date

CORRUGATED AND SOLID FIBERBOARD BOXES (continued)

Structural design notes for cor- rugated containers. (continued)	: Kellicutt, K. Q.	:
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Note No. 6, Stiffness of cor- rugated board in relation to box rigidity.	:	: Package Eng. 4(7):78- : 79, July 1959. Paper- : board Packaging 44(9): : 80-81, Sept. 1959.
	:	:
Note No. 7, Relationship of moment of inertia to stiffness of corrugated board.	:	: Package Eng. 4(8):84- : 86, Aug. 1959. Paper- : board Packaging 44(10): : 80-106, Oct. 1959.
	:	:
Note No. 8, Short-column crush test of corrugated board and its use in quality control.	:	: Package Eng. 4(9):92- : 94, Sept. 1959. Paper- : board Packaging 44(11): : 82-83, Nov. 1959.
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Note No. 9, Flat crush test of corrugated board.	:	: Package Eng. 4(10):110- : 112, Oct. 1959. Paper- : board Packaging 44(12): : 119-121, Dec. 1959.
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Note No. 10, Buckling patterns: of tubes.	:	: Package Eng. 4(11):76- : 83, Nov. 1959.
	:	:
Note No. 11, Compressive strength of boxes--Part I.	:	: Package Eng. 4(12):88- : 89, Dec. 1959.
	:	:
Note No. 12, Compressive strength of boxes--Part II.	:	: Package Eng. 5(1):76-77, : Jan. 1960. Paperboard : Packaging 45(3):73, 78, : Mar. 1960.
	:	:
Note No. 13, Compressive strength of boxes--Part III.	:	: Package Eng. 5(2):94-96, : Feb. 1960. Paperboard : Packaging 45(4):107, : Apr. 1960.

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<u>CORRUGATED AND SOLID FIBERBOARD BOXES (continued)</u>		
Structural design notes for corrugated containers. (continued)	Kellicutt, K. Q.	
Note No. 14, Triple-wall corrugated boxes--Part I.		Package Eng. 5(3):122-124, Mar. 1960. Paperboard Packaging 45(5):67, May 1960.
Note No. 15, Triple-wall corrugated boxes--Part II.	Kellicutt, K. Q., and Peters, C. C.	Package Eng. 5(4):122-123, Apr. 1960. Paperboard Packaging 45(6): June 1960.
Note No. 16, Triple-wall corrugated boxes--Part III.		Package Eng. 5(5):90-91; May 1960. Paperboard Packaging 45(7): July 1960.
Note No. 17, Stacking strength of boxes--Part I.		Package Eng. 5(6):124-126, June 1960.
Note No. 18, Stacking strength of boxes--Part II.		Package Eng. 5(7):94-96, July 1960.
Note No. 19, Drop-testing technique for boxes--Part I.		Package Eng. 5(8):110-111, Aug. 1960.
Note No. 20, Drop-testing technique for boxes--Part II.		Package Eng. 5(9):118-119, Sept. 1960.
Evaluation of nine styles of fiberboard boxes with more than four sides.	Heebink, T. B.	FPL Rpt. 2110. 1957.
Strength evaluations of corrugated containers by the drop test method.	Kellicutt, K. Q., and Landt, E. F.	Tappi Sept. 1956.

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Author

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CORRUGATED AND SOLID FIBERBOARD BOXES (continued)

New drop tests for fiberboard boxes.	: Kellicutt, K. Q., : and Landt, E. F. : : :	: Fibre Containers & : Paperboard Mills 40(10): : 33, 34, 39-44, Oct. : 1955. :
Basic design data for solid fiberboard shipping containers.	: Kellicutt, K. Q., : and Landt, E. F. : :	: Jour. Forest Prod. Res. : Soc. 3(5):90-94, 224, : Dec. 1953. :
Direction of fibers affects strength of fiber boxes.	: Forest Products : Laboratory :	: FPL Tech. Note 150. : Reissued 1953. :
Development of design data for corrugated fiberboard shipping containers.	: Kellicutt, K. Q., : and Landt, E. F. : :	: Tappi 35(9):398-402; : Sept. 1952. :
Basic design data for the use of fiberboard in shipping containers.	: Kellicutt, K. Q., : and Landt, E. F. : :	: Fibre Containers : Dec. 1951; FPL Rpt. : 1911. Rev. 1958. :
Safe stacking life of corrugated boxes.	: Kellicutt, K. Q., : and Landt, E. F. :	: Fibre Containers : Sept. 1951. :
Suggestions in making flat crush tests of corrugated fiberboard.	: Kellicutt, K. Q., : and Landt, E. F. : :	: Fibre Containers : May 1951. :
Pulps and corrugating paperboards from farm woodland hickory.	: McGovern, J. N., : Keller, E. L., and : Martin, J. S. :	: FPL Rpt. 1753. 1949. : +1961. :
Linerboards from jack pine and hardwood semichemical pulps.	: McGovern, J. N., : Mackin, G. E., and : Chidester, G. H. :	: Fibre Containers : Oct. 1948. :
Deterioration of fiberboard by molds.	: Englerth, G. H. :	: For. Path. Spec. Rel. : No. 29. Oct. 1946.

+Information reviewed and reaffirmed.

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CORRUGATED AND SOLID FIBERBOARD BOXES (continued)

Corrugated board and its component parts as engineering materials.	Carlson, T.A.	Amer. Management Assoc. Prod. Ser. 128. 1941.
Some factors affecting the compressive strength of fiber boxes.	Carlson, T.A.	Fibre Containers Mar. 1941; Paper Indus. & Paper World May 1941; Paper Trade Jour. June 5, 1941.
Bending tests of corrugated board and their significance.	Carlson, T.A.	Fibre Containers Mar. 1940; Paper Trade Jour. Feb. 22, 1940.
A study of corrugated fiberboard and its component parts as engineering materials.	Carlson, T.A.	Fibre Containers July 1939.
Effect of relative humidity on the moisture content and bursting strength of four container boards.	Seborg, C.O., Doughty, R.H., and Baird, P.K.	Paper Trade Jour. Oct. 12, 1933.
<u>Federal Specifications</u>		
*Box, paper-overlaid veneer (straparound type). (Domestic or overseas.)		PPP-B-575. 10¢.
*Boxes; fiberboard. (Domestic or overseas.)		PPP-B-636c. 25¢.
*Boxes; corrugated, triple wall, 350-pound maximum weight.		PPP-B-640c.
*Boxes, fiberboard, six or eight sides. (Domestic.)		PPP-B-655. 15¢.

Title

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CORRUGATED AND SOLID FIBERBOARD BOXES (continued)

Military Specifications

*Boxes, consolidation. : : MIL-B-21827A (GL
: : or SA)

TESTING OF CONTAINERS AND PACKAGING MATERIALS

New tests probe cushioning prop- : Jordan, C.A., : Package Eng. 10(12);
erties of corrugated board. : and Stern, R.K. : 76-94, Dec. 1965.
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Selecting package cushioning. : Stern, R.K. : Modern Packaging
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:
Outdoor exposure of container- : Mohaupt, A.A. : FPL Rpt. 2151. 1959.
grade paper-overlaid veneers. : : +1965.
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Standards
*Compression test for shipping : : ASTM D 642-47; TAPPI
containers. : : T804 m-45.
:
*Drop test for cylindrical shipping : : ASTM D 997-50.
containers. : :
:
*Drop test for bags. : : ASTM D 959-50.
:
*Drop test for shipping containers. : : ASTM D 775-61; TAPPI
:
:
:
*Revolving hexagonal drum test : : ASTM D 782-60; TAPPI
for shipping containers. : : T800 su-64.
:
:
*Incline-impact test for shipping : : ASTM D 880-63T;
containers. : : TAPPI T801 sm-44.
:
:
*Penetration test of liquids into : : ASTM D 998-51.
submerged containers. : :
:
:
*Test for large shipping cases and : : ASTM D 1083-53.
crates. : :

+Information reviewed and reaffirmed.

Title

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Publication and date

TESTING OF CONTAINERS AND PACKAGING MATERIALS (continued)

Standards (continued)

*Testing pallets.	:	:	ASTM D 1185-51T.
	:	:	
*Vibration test for shipping con-	:	:	ASTM D 999-63T.
tainers.	:	:	
	:	:	
*Test for water resistance of con-	:	:	ASTM D 951-51;
tainers by spray method.	:	:	TAPPI T805 m-55.
	:	:	
*Test for water vapor permeabil-	:	:	ASTM D 895-62T.
ity of packages.	:	:	
	:	:	
*Test for water vapor permeabil-	:	:	ASTM D 1008-59T.
ity of shipping containers.	:	:	
	:	:	
*Test for water vapor permeabil-	:	:	ASTM D 1251-63T.
ity of packages by cycle method.	:	:	
	:	:	
*Test for water vapor permeabil-	:	:	ASTM D 1276-63T.
ity of shipping containers by	:	:	
cycle method.	:	:	
	:	:	
*Test for adhesiveness of gummed	:	:	ASTM D 773-47;
tape.	:	:	TAPPI T463 m-52.
	:	:	
*Test for basis weight of paper	:	:	ASTM D 646-63T;
and paperboard.	:	:	TAPPI T410 os-61.
	:	:	
*Bending quality of paperboard.	:	:	TAPPI T474 m-47.
	:	:	
*Test for bleeding resistance of	:	:	ASTM D 917-49;
asphalted papers at elevated	:	:	TAPPI T475 m-50.
temperatures.	:	:	
	:	:	
*Test for blocking resistance of	:	:	ASTM D 918-49;
paper and paperboard.	:	:	TAPPI T477 m47.
	:	:	
*Test for bursting strength of	:	:	ASTM D 774-63T;
paper.	:	:	TAPPI T403 ts-63.

	:	:
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TESTING OF CONTAINERS AND PACKAGING MATERIALS (continued)

Standards (continued)

*Test for ring crush of paper-board.	:	: ASTM D 918-49;
	:	: TAPPI T472 m-51.
	:	:
*Flexural resistance and deflection of fiberboard for book-binding.	:	: TAPPI T469 sm-55.
	:	:
	:	:
*Test for internal tearing resistance of paper.	:	: ASTM D 689-62;
	:	: TAPPI T414 ts-64.
	:	:
*Test for machine direction of paper.	:	: ASTM D 528-63;
	:	: TAPPI T409 os-61.
	:	:
*Test for moisture of paper and paperboard by oven drying.	:	: ASTM D 644-55;
	:	: TAPPI T412 os-63.
	:	:
*Test for puncture and stiffness of paperboard, corrugated and solid fiberboard.	:	: ASTM D 781-59T;
	:	: TAPPI T803 m-50.
	:	:
	:	:
*Rigidity, stiffness, and softness of paper.	:	: TAPPI T451 m-60.
	:	:
	:	:
*Static bending test for corrugated paperboard.	:	: ASTM D 1098-61.
	:	:
	:	:
*Test for stretch of paper and paper products under tension.	:	: ASTM D 987-48T;
	:	: TAPPI T457 m-46.
	:	:
	:	:
*Test for tensile breaking strength of paper and paper products.	:	: ASTM D 828-60;
	:	: TAPPI T404 os-61.
	:	:
	:	:
*Test for wet tensile breaking strength of paper and paper products.	:	: ASTM D 829-48;
	:	: TAPPI T456 m-49.
	:	:

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TESTING OF CONTAINERS AND PACKAGING MATERIALS (continued)

Standards (continued)

*Test for tensile properties of thin plastic sheeting.	:	: ASTM D 882-61T.
	:	:
	:	:
*Test for thickness of paper and paper products.	:	: ASTM D 645-58T;
	:	: TAPPI T411 m-44.
	:	:
*Water absorptiveness of non-bibulous paper and paperboard.	:	: TAPPI T441 os-63.
	:	:
	:	:
*Test for water resistance of paper, paperboard, and other sheet materials by the dry indicator method.	:	: ASTM D 779-58;
	:	: TAPPI T433 m-44.
	:	:
	:	:
*Test for water vapor permeability of paper and paperboard.	:	: ASTM D 988 51T;
	:	: TAPPI T448 m-49.
	:	:
	:	:
*Water vapor permeability of paper and other sheet materials at high temperature and humidity.	:	: TAPPI T464 m-45.
	:	:
	:	:
*Adhesiveness of seals and closures for packages.	:	: TAPPI T806 sm-46.
	:	:
	:	:
*Conditioning paper and paper products for testing.	:	: ASTM D 685-44;
	:	: TAPPI T402 m-49.
	:	:
	:	:
*Conditioning paperboard, fiberboard, and paperboard containers for testing.	:	: ASTM D 641-49;
	:	: TAPPI T402 m-49.
	:	:
	:	:
*Creasing paper for permeability tests.	:	: ASTM D 1027-51;
	:	: TAPPI T465 sm-52.
	:	:
	:	:
*Definition of terms relating to shipping containers.	:	: ASTM D 996-59T.
	:	:

	:	:
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TESTING OF CONTAINERS AND PACKAGING MATERIALS (continued)

Standards (continued)

*Sampling paper and paper products.	:	: ASTM D 585-62;
	:	: TAPPI T400 ts-64.
	:	:
*Testing package cushioning materials.	:	: ASTM D 1372-55T.
	:	:
	:	:
*Flat crush of corrugated paper-board.	:	: ASTM D 1225-54.
	:	:

PALLETS

Some observations of plywood pallets in use.	: Heebink, T.B.	: U.S. Forest Serv. Res. Note FPL-096. 1965.
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Preservatives for wood pallets. : Blew, J. O., Jr. : FPL Rpt. 2166. 1959.

Bin pallets for agricultural prod- : Heebink, T.B. : FPL Rpt. 2115. 1958.
ucts. :

Hardwood pallet manufacturing. : Heebink, T.B., : FPL Rpt. 2132. 1958.
: and Fobes, E.W. :

*Minimum standard specifications : : Natl. Wooden Pallet
for warehouse, permanent or : : Mfr. Assoc., 1619 Mass.
returnable wooden pallets of West : : Ave., NW, Wash-
Coast wood. Species--Douglas- : : ington, D.C. 20036.
fir, hemlock, larch (tamarack). : :

*Plywood pallets--design and : : Amer. Plywood Assoc.,
fabrication. : : 1119 A St., Tacoma,
: : Wash. 98402.

*Specifications and grades for : : Natl. Wooden Pallet
hardwood warehouse, permanent : : Mfr. Assoc., 1619 Mass.
or returnable pallets. : : Ave., NW, Wash-
: : ington, D.C. 20036.

*Specifications for softwood ply- : : A joint specification of
wood pallets, pp. 61-65. : : the Natl. Wooden Pallet
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: : D.C. 20036 & the Amer.
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: : Wash. 98402.

Federal Specifications

*Pallets; materials-handling, wood: : NN-P-71. 5¢.
(General construction require- :
ments). :

*Pallet materials handling, box : : MIL-P-4894 (GL or
type wood (light duty). : : SA)

Title	Author	Publication and date
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PALLETS (continued)

*Pallet materials handling, hard-wood, post construction, 4-way.		: MIL-P-150011E (GL or SA)
*Pallet, materials handling, wood, ship cargo (stevedoring), 2-way entry.		: MIL-P-15943B (GL or SA)
*Pallet, softwood (hardwood posts), 40" x 48", 4-way nailed construction general purpose.		: MIL-P-16496 (Navy S and A)
*Pallet box, fiberboard expendable, for air shipment.		: MIL-P-26342 (Brookley)
*Pallet, materials handling, lightweight, air cargo.		: MIL-P-26966C (SA)
<u>American Standard</u>		
*Pallet sizes (ASA MH 1.1-1959).		: Amer. Soc. of Mech. Engr., 29 W. 39 St., New York 18, N. Y. \$2.00.

BARRELS

*Kiln drying beer barrel staves.	: Tiemann, H. D.	: Brewery Age. Jan. 1935; Barrel & Box & Pack. Jan. -Feb. 1935; Natl. Coopers Jour. Mar. 1935.
*Properly dried staves essential to good barrels.	: Loughborough, W.K.	: Modern Brewery Mar. 1934.
Comparative tests of white oak and Douglas-fir barrels.	: Wilson, T. R. C.	: FPL Rpt. 678. 1925. +1958.

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BARRELS (continued)

Federal Specifications

*Barrels; wood, slack.(Domestic or overseas.)	:		:	PPP-B-41. 10¢.
	:		:	
	:		:	
*Barrels; wood, tight (for liquids).	:		:	PPP-B-112a. 10¢.
	:		:	

GENERAL PACKAGING DATA

The FPL linear accelerometer calibrator.	:	Godshall, W.D.	:	FPL Rpt. 2239. 1962.
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Packaging research at the U.S. Forest Products Laboratory.	:	Champion, F.J.	:	FPL Rpt. 2064. 1956.
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*Wood's future in the packaging industry.	:	Kurtenacker, R.S.	:	Forest Prod. Jour. 10(7):333-336, July 1960.
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Selecting package cushioning.	:	Stern, R.K.	:	Modern Packaging Dec. 1959.
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*Effect of shape on efficiency of boxes.	:	Jordan, C.A.	:	Fibre Containers Feb. 1957.
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Developments in packaging in 1955.	:	Kruger, K.W.	:	Forest Prod. Jour. 6(2): 67-69, Feb. 1956.
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*Research in the use of wood for containers.	:	Carlson, T.A.	:	Natl. Farm Chemurg. Council (Columbus, Ohio) paper 507, 4 pp., 1956.
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*Packaging research and development.	:	Kruger, K.W.	:	Forest Prod. Jour. 5(1): 22-55, Feb. 1955.
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<u>Federal Specifications</u>				
*Boxes, folding, paperboard. (Domestic.)	:		:	PPP-B-566a. 20¢.
	:		:	

Title	:	Author	:	Publication and date
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GENERAL PACKAGING DATA (continued)

Federal Specifications (continued)

*Boxes, paperboard, metal stayed (including stay material).	:	:	PPP-B-665. 5¢.
	:	:	
	:	:	
*Boxes, set-up, paperboard. (Domestic.)	:	:	PPP-B-676a. 15¢.
	:	:	
	:	:	

Military Specifications

*Wallboard, packaging of.	:	:	MIL-W-3448A. (MO or YD)
	:	:	
	:	:	
*Parts and equipment, aeronautical, preparation for delivery.	:	:	MIL-P-7936A. (MC or WP)
	:	:	
	:	:	

Military Standard

*Quality of wood members for containers and pallets.	:	:	MIL-STD-731.
	:	:	

STRAPPING AND METAL REINFORCING

Federal Specifications

*Strapping; flat, steel.	:	:	QQ-S-781e. 10¢.
	:	:	
*Strapping; round, steel, bare and zinc coated.	:	:	QQ-S-790b. 10¢.
	:	:	

FASTENERS

Effects of various preservatives of field boxes on nail holding.	:	Scholten, John A.	:	U.S. Forest Serv. Res. Paper FPL 42. 1965.
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Nail withdrawal resistance of American woods.	:	Forest Products Laboratory	:	U.S. Forest Serv. Res. Note FPL-093. 1965.

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Performance of container fasteners subjected to static and dynamic withdrawal.	: Kurtenacker, R. S.	: U. S. Forest Serv. Res. Paper FPL 29. 1965.
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*Response of timber joints with metal fasteners to lateral impact loads.	: Jordan, C. A.	: Materials Res. & Stds. 3(5):368-376, May 1963.
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Staples for containers.	: Mohaupt, A. A.	: Indus. Packaging Aug. 1958.
Nails and their characteristics in boxes and crates.	: Anderson, L. O.	: Package Eng. 3(4):52-54, 56-57, Apr. 1958.

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<u>FASTENERS (continued)</u>		
Details of nailing for common styles of nailed wood boxes.	Forest Products Laboratory	FPL Tech. Note 182, 1953.
*Good practice in nailing wood.	Markwardt, L. J., and Gahagan, J. M.	Natl. Safety News Mar. 1935.
*How surface condition of nails affects their holding power in wood.	Markwardt, L. J., and Gahagan, J. M.	Barrel & Box & Pack. Sept. 1932.
Effect of nail points on the withdrawal resistance of plain nails.	Scholten, J. A.	FPL Rpt. 1226. 1930. +1962.
<u>Federal Specifications</u>		
*Nails (small) and tacks; cut.		FF-N-103a. 10¢.
*Nails, wire brads, and staples.		FF-N-105a. 15¢.
*Screws; wood.		FF-S-111b. 10¢.
*Fasteners, wood joint, corrugated (saw edge).		FF-F-133. 5¢.
*Bolts; lag, steel (lag screws).		FF-B-561b. 5¢.
*Bolts; nuts, studs, and tap rivets (and material for same).		FF-B-571a. 5¢.
*Nuts, hexagon and square.		FF-N-836a. 25¢.
<u>Military Specifications</u>		
*Fastener assembly, (metal) nut sleeve.		MIL-F-4209B (GL or YD)

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Weights of various woods grown in the United States.	: Forest Products Laboratory	: FPL Tech. Note 218. Reissued 1961.
Methods of determining the specific gravity of wood.	: Forest Products Laboratory	: FPL Tech. Note B-14. Rev. 1956.
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*Performance of paper-veneers.	: Clarke, E. H.	: Modern Packaging 28(10):155-162, 212-214, June 1955.
*Evaluation of container-grade paper-overlaid veneer.	: Clarke, E. H.	: WADC Tech. Rpt. 53-216. Jan. 1954. Aero. Systems Div. WPAFB, Ohio. Attn: Exploratory Applications Section (ASRCEP-1).
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*Aspen for containers.	: Sands, Waldo	: Lake States Aspen Rpt.
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*California red fir compares favorably with other western species.	: Drow, J. T., and	: Calif. Lbr. Merchant.
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<u>Federal Specifications</u>		
*Veneer, paper-overlaid, container-grade. (For use in domestic or overseas containers.)	:	: PPP-V-205a. 10¢.
	:	:
	:	:
	:	:
*Plywood, container grade. (For use in domestic or overseas containers.)	:	: NN-P-515a. 10¢.
	:	:
	:	:

MISCELLANEOUS CONTAINER DATA

FPL dynamic compression testing equipment for testing package cushioning material.	: Stern, R. K.	: U. S. Forest Serv. Res.
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*The need for better simulated service tests for packaging.	: Jordan, C. A.	: ASTM Spec. Tech. Pub.
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Selecting package cushioning.	: Stern, R. K.	: Modern Packaging
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Utilization of white-pocket Douglas-fir in containers.	:	Briggs, E. V.	:	FPL Rpt. 1959. 1953. +1959.
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Chemical dipping treatments for controlling molding and staining of wood boxes and crates.	:	Scheffer, T. C.	:	For. Path. Spec. Rel. No. 28. 1946.
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*Side lights on the revolving drum test for boxes.	:	Carlson, T. A.	:	Amer. Management Assoc. Packaging Series 18. 1946.
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*Speeded up kiln drying schedules for aspen boxing and crating lumber.	:	Smith, H. H.	:	Wood Products 49(3): 46, 48, 50, 52-54. Mar. 1944. Same; Kiln drying schedule for aspen boxing and crating lumber, Barrel & Box & Packaging 49(1):8-10. Jan. 1944.
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*Preservation, packaging, and packing of military supplies and equipment.	:		:	AFM 71-1, TM 38-230, NAVE XOS P-938). \$1.75.
	:		:	
<u>Federal Specifications</u>	:		:	
*Paperboard, wrapping, cushioning.	:		:	PPP-P-291a. 5¢.
	:		:	

+Information reviewed and reaffirmed.

Title	:	Author	:	Publication and date
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MISCELLANEOUS CONTAINER DATA (continued)

Federal Specifications (continued)

*Drums, fiber. (Domestic or overseas.)	:	:	PPP-D-723e. 25¢.
	:	:	
	:	:	
*Cushioning material, cellulosic.	:	:	PPP-C-843. 10¢.
	:	:	
*Excelsior, wood, fabricated pads and bulk form.	:	:	PPP-E-911a. 5¢.
	:	:	
	:	:	

Military Specifications

*Preservation, methods of.	:	:	MIL-P-116D. (SA)
	:	:	
*Packaging materials, volatile corrosion inhibitor treated, opaque.	:	:	MIL-P-3420B. (MR or WP)
	:	:	
	:	:	
*Cushioning material, fibrous glass.	:	:	MIL-C-17435B. (GL or SA)
	:	:	
	:	:	
*Cushioning material, bound fiber.	:	:	MIL-C-7769. (WP)
	:	:	
	:	:	
*Cushioning material; elastic type, general.	:	:	MIL-C-26861. (Brookley AFB)
	:	:	
	:	:	
*Fiberboard, solid, dunnage multipurpose cushioning and blocking applications.	:	:	MIL-F-26862. (Brookley AFB)
	:	:	

DATA ON SPECIFIC COMMODITY CONTAINERS

Condition of preservative treated field boxes after 5 years of outdoor exposure.	:	Kurtenacker, R. S.,	:	FPL Rpt. 2054. 1956.
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+Information reviewed and reaffirmed.

Title

Author

Publication and date

DATA ON SPECIFIC COMMODITY CONTAINERS (continued)

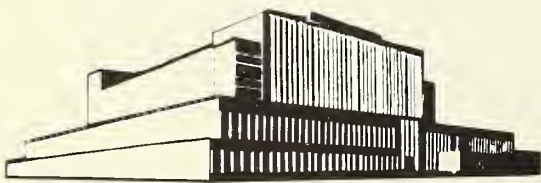
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*Water oak veneer for southern : citrus boxes. :	: Kurtenacker, R. S. ; South. Lbrmn. : and Skidmore, K. E. : Dec. 15, 1947.
*White fir for fruit and vegetable : shipping containers. :	: Kurtenacker, R. S. : Barrel & Box & Packages : Apr. 1947; Modern : Packaging May 1947.
*Postwar packages and containers: : for marketing foods. :	: French, Delbert R. : USDA Bur. Agr. Econ. : Oct. 1945.
*Tests of woods for butter : containers with reference to : imparting odor and flavor. :	: Davis, E. M., and : USDA Misc. Pub. 250. : Morbeck, G. C. : 1936.
*Description of the tests made of : southern hardwoods for butter : boxes and tubs. :	: Davis, E. M. : Barrel & Box & Packages : Oct. 1934; Tests on : southern hardwoods for : butter tubs. Wooden : Barrel Feb. 1935.

PUBLICATION LISTS ISSUED BY THE
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Box, Crate, and Packaging Data	Logging, Milling, and Utilization of Timber Products
Chemistry of Wood	Mechanical Properties of Timber
Drying of Wood	Structural Sandwich, Plastic Laminates, and Wood-Base Components
Fire Protection	Thermal Properties of Wood
Fungus and Insect Defects in Forest Products	Wood Fiber Products
Furniture Manufacturers, Woodworkers, and Teachers of Woodshop Practice	Wood Finishing Subjects
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